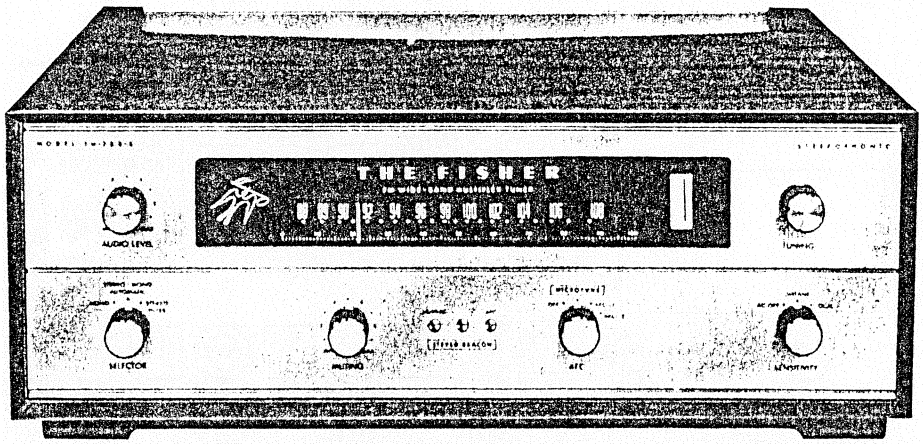
THE FISHER
FM-200-B
SERVICE
MANUAL



MODEL FM-200-B

CHASSIS SERIAL NUMBERS
FROM 50001 TO 59999 INCLUSIVE

FISHER RADIO CORPORATION · NEW YORK

THE FISHER FM-200-B
CHASSIS SERIAL NUMBERS
FROM 50001 TO 59999 INCLUSIVE

PARTS DESCRIPTION LIST • MULTIPLEX SECTION

CAPACITORS

10% tolerance for all fixed capacitors, unless otherwise noted or marked GMV (guaranteed minimum value). All capacitors not marked uf are pF (uuf).

Symbol	Description	Part No.
C200	Ceramic, .01uf, +80 —20%, 500V	C50089-7
C201	Ceramic, 680, 1000V	C50072-2
C203	Ceramic, 220, 1000V	C50183-3
C204	Mica, 470, 5%, 300V	C50332-4
C205	Ceramic, 82, N1500, 1000V	C50070-7
C206	Ceramic, .001uf, GMV, 500V	C50089-2
C207	Ceramic, .005uf, +80 —20%, 500V	C50089-6
C208, 209	Mica, 4700, 5%, 500V	C50332-5
C210	Electrolytic, 1uf, 350V	C50283-3
C211, 212	Ceramic, .001uf, GMV, 500V	C50089-2
C213	Ceramic, .05uf, +80 —20%, 100V	C50073-2
C214	Mylar, .0047uf, 400V	C50197-25
C215	Mica, 3900, 5%, 500V	C50332-6
C216, 217	Ceramic, .001uf, GMV, 500V	C50089-2
C218	Ceramic, .02uf, 20%, 500V	C50089-5
C219	Ceramic, 330, 1000V	C50072-1
C220	Ceramic, .02uf, 20%, 500V	C50089-5
C221, 222	Mylar, .047uf, 10%, 250V	C50197-52
C223, 224	Ceramic, .001uf, 1000V	C50072-3
C225, 226	Ceramic, 2200, 1000V	C50072-5

RESISTORS AND POTENTIOMETERS

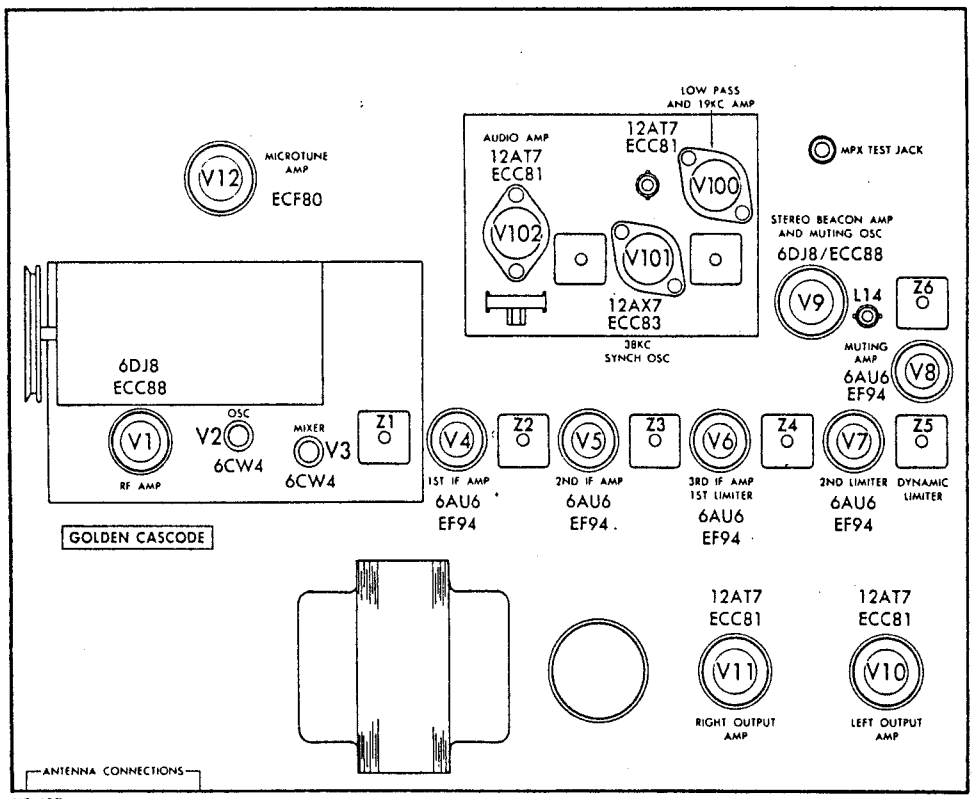
In ohms, 10% tolerance, ½ watt, unless otherwise noted. K=Kilohm, M=Megohm.

Symbol	Description	Part No.
R200	Composition, 22M	RC20BF226K
R201	Composition, 4.7K, 5%	RC20BF472J
R202	Composition, 15K, 5%	RC20BF153J
R203	Composition, 10M	RC20BF106K
R204	Dep. Carbon, 1M, 5%, ⅓ W	R33DC105J
R205	Dep. Carbon, 330K, 5%, ⅓ W	R33DC334J
R206	Dep. Carbon, 1M, 5%, ⅓ W	R33DC105J
R207	Dep. Carbon, 1.5M, 5%, ⅓ W	R33DC155J
R208	Dep. Carbon, 22K, 5%, ⅓ W	R33DC223J
R209, 210, 211, 212	Composition, 33K, 5%	RC20BF333J
R213, 214	Dep. Carbon, 100K, 5%, ⅓ W	R33DC104J
R215	Potentiometer, 50K, MPX-separation	R50150-4
R216	Composition, 10M	RC20BF106K
R217, 218	Dep. Carbon, 18K, 5%, ⅓ W	R33DC183J
R219, 220	Dep. Carbon, 15K, 5%, ⅓ W	R33DC153J
R221	Composition, 10M	RC20BF106K
R222, 223, 224, 225	Dep. Carbon, 22K, 5%, ⅓ W	R33DC223J
R226, 227, 228, 229, 230	Dep. Carbon, 1M, 5%, ⅛ W	R12DC105J

MISCELLANEOUS

Symbol	Description	Part No.
CR100, 101, 102, 103	Diode, Type 1112	V-1112
L100	Coil, Low Pass	L50210-30
L101	Coil, 5.25 M.H., 5%	L50334-1
L102, 103	Coil, 20 M.H., 5%	L50334-2
Z100	Transformer, 19Kc	ZZ50210-34
Z101	Coil, 38Kc	ZZ50210-33

TUBE LAYOUT



INS-103

Read These Instructions With Extreme Care Before Attempting Alignment.

CHASSIS: Turn the TUNING knob completely counterclockwise without forcing. Dial pointer should be at zero index mark on logging scale. If not, reset the dial pointer. Disconnect the external antenna. When using an oscilloscope for alignment, set the AUDIO LEVEL control for no overload, as shown by the proper waveform shape. Set remaining controls as follows: SELECTOR, MONO; MUTING, OFF; AFC, OFF; SENSITIVITY, DISTANT; ANTENNA SELECTOR (on rear panel), 300.

SIGNAL GENERATOR: The signal generator equipment must be able to supply RF ±22.5 KC deviation at 400 cps.

INDICATOR: DC VTVM, and scope for alignment.

ALIGNMENT: Allow the chassis and test instruments to warm up for at least 15 minutes. Adjust the line voltage for 117 volts AC, 50-60 cps. Use fully insulated tools: a small screwdriver for all trimming capacitors; a K-tran tool for Z1, Z2, Z3; a hex tool for Z4, Z5, Z6, L3, L9, L25, L10, and L14.

NOTES:
1—For accurate alignment, signal generator output voltage must be adjusted to produce meter readings within the range specified in the INDICATION column for each step.
2—Signal generator frequency should be held constant for IF, limiter, and ratio detector alignment (Z1 through Z6).
3—If adjustment of muting oscillator is necessary, adjust L14 for 3MC oscillation using a grid-dip meter.
4—Do not tamper with adjustments on multiplex sub-chassis. These circuits are extremely stable and should require no service other than tube replacement, which does not affect alignment. Multiplex alignment requires special test equipment which will be available in the near future. If servicing is required, write to:

FISHER RADIO CORPORATION · 21-21 44th DRIVE · LONG ISLAND CITY 1, N. Y.

FM ALIGNMENT
(tuner only)

STEPS	CHASSIS	SIGNAL GENERATOR			INDICATOR	ALIGNMENT	
	TUNING	COUPLING	FREQ.	MOD.	TYPE CONNECTION	ADJUST	INDICATION
1	Point of no signal and no interference	FM generator connected to pin 1 of V6	10.7 MC	None	Connect DC VTVM to test point 3	Z4, Z5 top, Z6 bottom and top for max. indication	Between +5 and +9 volts
2	Point of no signal and no interference	FM generator connected to pin 1 of V6	10.7 MC	None	Connect DC VTVM to test point 4	Z6 top for min. indication	Zero reading on zero center scale
3	Point of no signal and no interference	FM generator connected to pin 1 of V5	10.7 MC	None	Connect DC VTVM to test point 2	Z3 top and bottom for max. indication	Between —0.5 and —1.0 volt
4	Point of no signal and no interference	FM generator connected to test point 1 through wire "gimmick" (less than 0.5 uuf)	10.7 MC	None	Connect DC VTVM to test point 2	Z1 and Z2 top and bottom for max. indication	Between —0.5 and —1.0 volt
5	90 MC	FM generator connected to 300 ohm terminals through 120 ohm carbon resistors	90 MC	30% FM (22.5 KC Dev.) at 400 cps.	DC VTVM to test point 2 and scope to RIGHT or LEFT OUTPUT jack	L10, L25, L9 and L3 for sine waveform and max. neg. voltage	Less than —3 volts
6	106 MC	FM generator connected to 300 ohm terminals through 120 ohm carbon resistors	106 MC	30% FM (22.5 KC Dev.) at 400 cps.	DC VTVM to test point 2 and scope to RIGHT or LEFT OUTPUT jack	C21, C24, C15 and C2 for sine waveform and max. neg. voltage	Less than —3 volts
7	Repeat steps 5 and 6 for proper dial calibration and maximum output.						

PARTS DESCRIPTION LIST

CAPACITORS

10% tolerance for all fixed capacitors, unless otherwise noted or marked GMV (guaranteed minimum value). All capacitors not marked uf are pF (uuf).

Symbol	Description	Part No.
C1	Ceramic, 100, N1500, 1000V	C50070-6
C2	Ceramic Trimmer	C662-123
C3	FM Variable	C857-115-1
C4	Ceramic, 100, N1500, 1000V	C50070-6
C5	Ceramic, 10, ±.5, NPO, 500V	CC20CJ100D5
C6, 7, 8	Ceramic,Feedthru, 1000, GMV	C592-187
C9	Molded, .01uf, 20%, 600V	C2747
C10	Ceramic, Feedthru, 1000, GMV	C592-187
C11	Electrolytic, 25uf, 6V	C639-114
C12	Ceramic, Feedthru, 1000, GMV	C592-187
C13	Ceramic, 1000, GMV, 500V	C50089-2
C14	Ceramic, Feedthru, 1000, GMV	C592-187
C15	Ceramic Trimmer	C662-123
C16	Ceramic, Feedthru, 1000, GMV	C592-187
C17	Mylar, .1uf, 125V	C50435-7
C18	Molded, .01uf, 20%, 600V	C2747
C19	Ceramic, 3, NPO, 1000V	C50070-28
C20	Ceramic, 10, ±.5, NPO, 500V	CC20CJ100D5
C21	Ceramic Trimmer	C662-123
C22	Ceramic, 6, ±.5, N470, 500V	CC20TJ060D5
C23	Ceramic, 8, ±.5, NPO, 500V	CC20CJ080D5
C24	Ceramic Trimmer	C662-123
C25	Ceramic, 68, N150, 500V	CC30PJ680J5
C26	Ceramic, 100, N150, 1000V	C50070-6
C27	Ceramic, 1000, GMV, 500V	C50089-2
C28	Electrolytic, 4-Section: A — 40uf, 300V; B — 40uf, 300V; C — 40uf, 250V; D — 40uf, 250V	C670-125B
C29	Ceramic, 24, 5%, N150, 1000V	C50070-8
C30	Ceramic, 82, 5%, N1500, 1000V	C50070-33
C31	Ceramic, 5000, +80 —20%, 500V	C50089-6
C32	Ceramic, 820, 1000V	C50072-7
C33	Ceramic, Feedthru, 1000, GMV	C592-187
C34, 35	Ceramic, 5000, +80 —20%, 500V	C50089-6
C36, 37	Ceramic, Feedthru, 1000, GMV	C592-187
C38, 39	Ceramic, 5000, +80 —20%, 500V	C50089-6
C40	Ceramic, .02uf, +80 —20%, 500V	C50089-4
C41	Mylar, .1uf, 250V	C50187-54
C42	Ceramic, 2700, 1000V	C50072-17
C43, 44	Ceramic, 5000, +80 —20%, 500V	C50089-6
C45	Ceramic, .01uf, 20%, 500V	C50089-3
C46	Ceramic, .02uf, +80 —20%, 500V	C50089-4
C47	Ceramic, .02uf, 20%, 500V	C50089-5
C48	Ceramic, 2700, 1000V	C50072-17
C49	Ceramic, 5000, +80 —20%, 500V	C50089-6
C50, 51	Ceramic, 39, 1000V	C50070-17
C52, 53	Ceramic, 56, 5%, 1000V	C50070-38
C54	Ceramic, 24, 5%, N150, 1000V	C50070-8
C55	Ceramic, 2700, 1000V	C50072-17
C56	Ceramic, 5000, +80 —20%, 500V	C50089-6
C57, 58	Ceramic, 390, 1000V	C50072-6
C59	Mylar, .1uf, 125V	C50435-7
C60, 61	Ceramic, 5000, 20%, 500V	C50089-1
C62	Ceramic, 5000, +80 —20%, 500V	C50089-6
C63, 64	Ceramic, 100, N1500, 1000V	C50070-6
C65, 66	Mylar, .1uf, 250V	C50197-54
C67	Ceramic, 2700, 1000V	C50072-17
C68	Ceramic, 5000, +80 —20%, 500V	C50089-6
C69	Ceramic, .02uf, GMV, 1000V	C50071-6
C70	Ceramic, 5000, +80 —20%, 500V	C50089-6
C71	Electrolytic, 4uf, 50V	C50283-5
C72	Ceramic, 5000, +80 —20%, 500V	C50089-6
C73	Mylar, .1uf, 125V	C50435-7
C74	Ceramic, 12, NPO, 1000V	C50070-2
C75	Ceramic, 39, 1000V	C50070-17
C76	Ceramic, 2700, 1000V	C50072-17
C77	Ceramic, .02uf, GMV, 1000V	C50071-6
C78	Ceramic, 5000, +80 —20%, 500V	C50189-6
C79	Ceramic, 330, 1000V	C50072-1
C80	Ceramic, 560, 1000V	C50072-14
C81	Mylar, .1uf, 125V	C50435-7
C82, 83	Ceramic, 330, 1000V	C50072-1
C84	Polystyrene, 2700, 5%, 125V	CP50394-10
C85, 86	Electrolytic, 8uf, 50V	C629-138
C87	Mylar, .1uf, 125V	C50435-7
C89	Ceramic, Feedthru, 1000, GMV	C592-187
C90	Ceramic, 5000, +80 —20%, 500V	C50089-6
C91	Ceramic, 5000, +80 —20%, 500V	C50089-6
C92	Ceramic, 5000, +80 —20%, 500V	C50089-6
C93	Mylar, .1uf, 125V	C50435-7
C94	Electrolytic, 2uf, 70V	C721-142
C95	Electrolytic, .5uf, 350V	C50283-7
C96	Mylar, .1uf, 125V	C50435-7

RESISTORS AND POTENTIOMETERS

In ohms, 10% tolerance, ½ watt unless otherwise noted. K=Kilohms. M=Megohms.

Symbol	Description	Part No.
R1	Composition, 82	RC20BF820K
R2	Composition, 820	RC20BF821K
R3	Composition, 82	RC20BF820K
R4	Composition, 100K	RC20BF104K
R5	Dep. Carbon, 470K, 5%, ⅓W	R33DC474J
R6	Composition, 120	RC20BF121K
R7	Dep. Carbon, 1M, 5%, ⅓W	R33DC105J
R8	Composition, 1K	RC20BF102K
R9, 10	Dep. Carbon, 330K, 5%, ⅓W	R33DC334J
R11	Composition, 470K, 5%	RC20BF474J
R12	Composition, 820K	RC20BF824K
R13	Composition, 10K, 5%	RC20BF103J
R14	Dep. Carbon, 470, 5%, ⅓W	R33DC471J
R15	Dep. Carbon, 470K, 5%, ⅓W	R33DC474J
R16, 17	Composition, 120	RC20BF121K
R18	Composition, 27	RC20BF207K
R19	Dep. Carbon, 2.7K, 5%, ⅓W	R33DC272J
R20	Glass, 270, 3W	RPG3W271K
R21	Composition, 330K, 5%	RC20BF334J
R22	Glass, 270, 3W	RPG3W271K
R23	Composition, 1K	RC20BF102K
R24	Composition, 3.3K, 1W	RC30BF332K
R25	Composition, 56K	RC20BF563K
R26	Composition, 22K	RC20BF223K
R27	Composition, 10K, 2W	RC40BF103K
R28	Composition, 150	RC20BF151K
R29	Dep. Carbon, 1.8M, 5%, ⅓W	R33DC185J
R30	Composition, 22M	RC20BF226K
R31	Composition, 39K	RC20BF393K

PARTS DESCRIPTION LIST

R32	Composition, 390K	RC20BF394K
R33	Composition, 1K	RC20BF102K
R34	Composition, 1.2K	RC20BF122K
R35	Composition, 4.7K	RC29BF472K
R36	Dep. Carbon, 1.8M, 5 %, 1/3 W	R33DC185J
R37	Composition, 27K, 1W	RC30BF273K
R38	Potentiometer, 25K, MicroTune Level	R50103-2
R39	Dep. Carbon, 470K, 5 %, 1/3 W	R33DC474J
R40	Composition, 27K	RC20BF273K
R41	Composition, 10M	RC20BF106K
R42	Composition, 150	RC20BF151K
R43	Composition, 39K	RC20BF393K
R44	Composition, 10M	RC20BF106K
R45	Composition, 27K	RC20BF273K
R46	Composition, 1K	RC20BF102K
R47, 48	Dep. Carbon, 22K, 5 %, 1/3 W	R33DC223J
R49, 50	Potentiometer, Dual, 500K, Output Lev.	R50160-109
R51	Dep. Carbon, 470K, 5 %, 1/3 W	R33DC474J
R52	Dep. Carbon, 100K, 5 %, 1/3 W	R33DC104J
R53	Dep. Carbon, 470K, 5 %, 1/3 W	R33DC474J
R54	Dep. Carbon, 100K, 5 %, 1/3 W	R33DC104J
R55, 56	Dep. Carbon, 47K, 5 %, 1/3 W	R33DC473J
R57	Dep. Carbon, 82K, 5 %, 1/3 W	R33DC823J
R58	Composition, 560K	RC20BF564K
R59	Potentiometer, 100K, Muting Control	R50160-106
R60	Dep. Carbon, 100K, 5 %, 1/3 W	R33DC104J
R61	Composition, 680	RC20BF681K
R62	Dep. Carbon, 100K, 5 %, 1/3 W	R33DC104J
R63	Composition, 680	RC20BF681K
R64	Composition, 68K	RC20BF683K
R65	Dep. Carbon, 470K, 5 %, 1/3 W	R33DC474J
R66, 67	Composition, 150K	RC20BF154K
R68	Composition, 10K	RC20BF103K
R69	Composition, 1K	RC20BF102K
R70	Dep. Carbon, 100K, 5 %, 1/3 W	R33DC104J
R71, 72	Dep. Carbon, 1.8M, 5 %, 1/3 W	R33DC185J
R73	Dep. Carbon, 220K, 5 %, 1/3 W	R33DC224J
R74, 75	Composition, 22M	RC20BF226K
R76	Dep. Carbon, 22K, 5 %, 1/3 W	R33DC223J
R77	Composition, 180	RC20BF181K
R78, 79	Dep. Carbon, 100K, 5 %, 1/3 W	R33DC104J
R80, 81	Dep. Carbon, 1M, 5 %, 1/3 W	R33DC105J
R82	Composition, 56K	RC20BF503K
R83	Composition, 1K	RC20BF102K
R84	Dep. Carbon, 330K, 5 %, 1/3 W	R33DC334J
R85	Composition, 150	RC20BF151K
R86	Composition, 15K	RC20BF153K
R87	Composition, 18K	RC20BF183K
R88	Composition, 1K	RC20BF102K
R89	Dep. Carbon, 100K, 5 %, 1/3 W	R33DC104J
R90	Dep. Carbon, 82K, 5 %, 1/3 W	R33DC823J
R91	Dep. Carbon, 270K, 5 %, 1/3 W	R33DC274J
R92	Composition, 47K	RC20BF473K
R93	Composition, 1K	RC20BF102K
R94	Composition, 270, 5 %	RC20BF271J
R96	Dep. Carbon, 470K, 5 %, 1/8 W	R12DC474J
R97	Composition, 1.5K, 5 %	RC20BF152J
R98	Composition, 1K, 5 %	RC20BF102J
R99	Dep. Carbon, 470K, 5 %, 1/8 W	R12DC474J
R100	Dep. Carbon, 100K, 5 %, 1/8 W	R12DC104J
R101, 102	Composition, 6.8K, 5 %	RC20BF682J
R104	Dep. Carbon, 56K, 5 %, 1/8 W	R12DC563J
R105	Dep. Carbon, 150K, 5 %, 1/8 W	R12DC154J
R106, 107, 108, 109	Dep. Carbon, 820K, 5 %, 1/8 W	R12DC824J
R110	Dep. Carbon, 470K, 5 %, 1/8 W	R12DC474J
R111	Dep. Carbon, 47K, 5 %, 1/8 W	R12DC473J

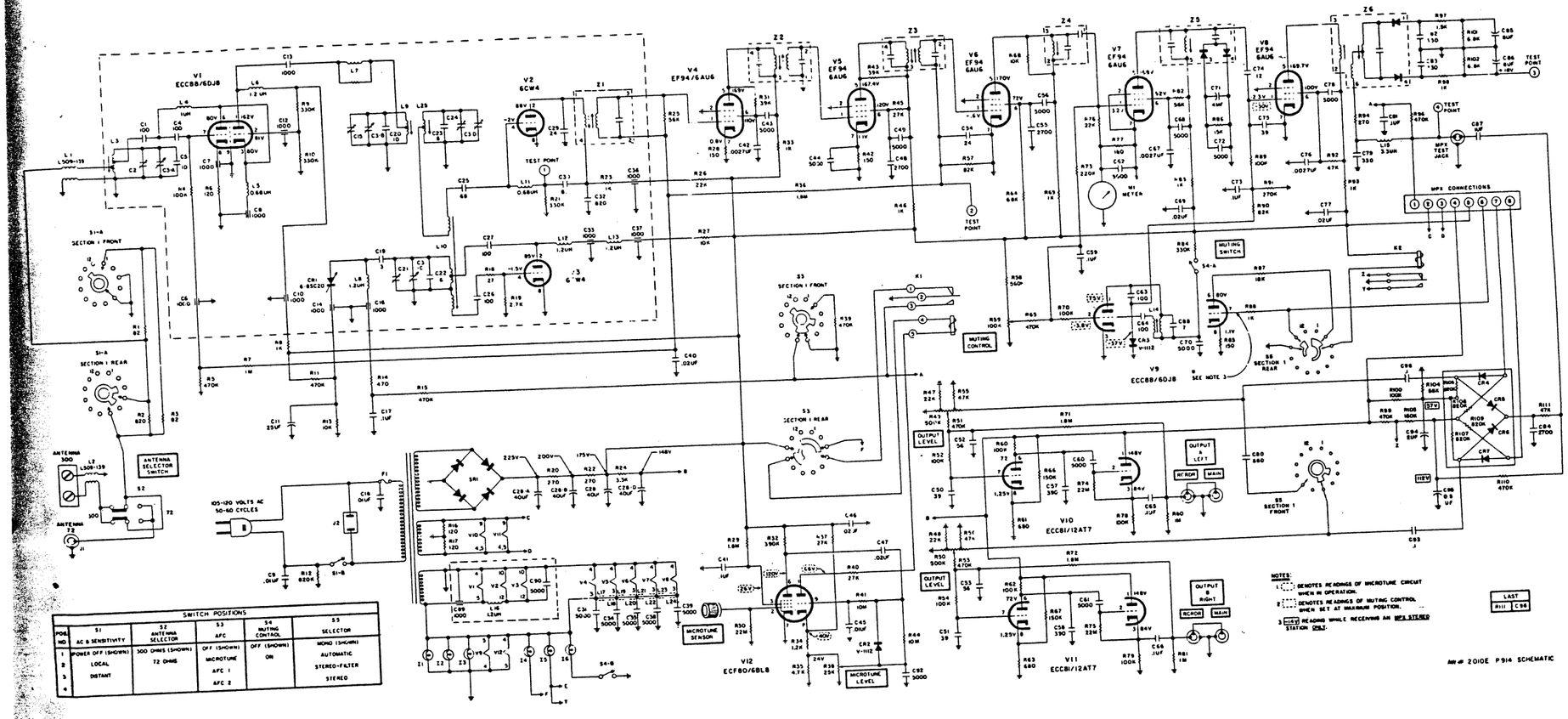
CHOKES, COILS & TRANSFORMERS

Symbol	Description	Part No.
L1, 2	F.M. Antenna, Matching	L509-139
L3	F.M. Antenna Coil	L857-121
L4	Choke, 1 Microhenry	L50066-2
L5	Choke, .68 Microhenry	L50066-1
L6	Choke, 1.2 Microhenries	L50066-3
L7	Choke, RF	L629-180
L8	Choke, 1.2 Microhenries	L50066-3
L9	FM RF Coil	L857-122
L10	FM Oscillator Coil Ass'y	AS857-125
L11	Choke, .68 Microhenry	L50066-1
L12, 13	Choke, 1.2 Microhenries	L50066-3
L14	Coil, Muting Oscillator	L50210-22
L15	Choke, 3.3 Microhenries	L50066-8
L16	Choke, 1.2 Microhenries	L50066-3
L17 thru 24	Choke, Filament, Ferrite Bead	L592-189
L25	Choke, FM Mixer Coil	L857-123
T1	Transformer, Power	T914-115
Z1	FM IF Transformer	ZZ662-117
Z2	FM IF Transformer	ZZ2987
Z3	FM IF Transformer	ZZ50210-2
Z4	FM Limiter Coil	ZZ50210-6
Z5	FM Limiter Coil Ass'y	L935-122
Z6	FM Ratio Detector	ZZ50210-9

MISCELLANEOUS

Symbol	Description	Part No.
CR1	Diode, Varicap, Type SC20, 6.8	V-726-130
CR2, 3, 4, 5, 6, 7	Diode, Type 1112	V-1112
F1	Fuse, 1.5 Amps	F766-141
I1, 2	Lamp, Dial	I50082-6
I3	Lamp, Meter No. 470F	I50009-4
I4, 5, 6	Lamp, #47	I50009-1
K1	Relay, MicroTune	K50314
K2	Relay, STEREO BEACON	K50314
M1	Meter, Tuning	M766-137
S1	Switch, Sensitivity	S914-127
S2	Switch, Slide, Antenna Select.	S50200-2
S3	Switch, AFC	S700-124
S4	Switch, Muting	Part of R59
S5	Switch, Selector	S914-129
——	Dress Panel	AS914-108
——	Dipole Ass'y	AS50,227-1
——	Dipole Ass'y	AS50227-1
——	Tube Shield, 7 Pin	E3330
——	Tube Shield, 9 Pin	E3287
——	Knob, Tuning	E50325-2
——	Knob	E50325-1
——	Jewel, Red	I50162-1
——	Jewel, Yellow	I50162-2
——	Jewel, Green	I50162-4
——	Dial, Glass	N914-109
——	Fuse Holder	X563-151

SCHEMATIC DIAGRAM



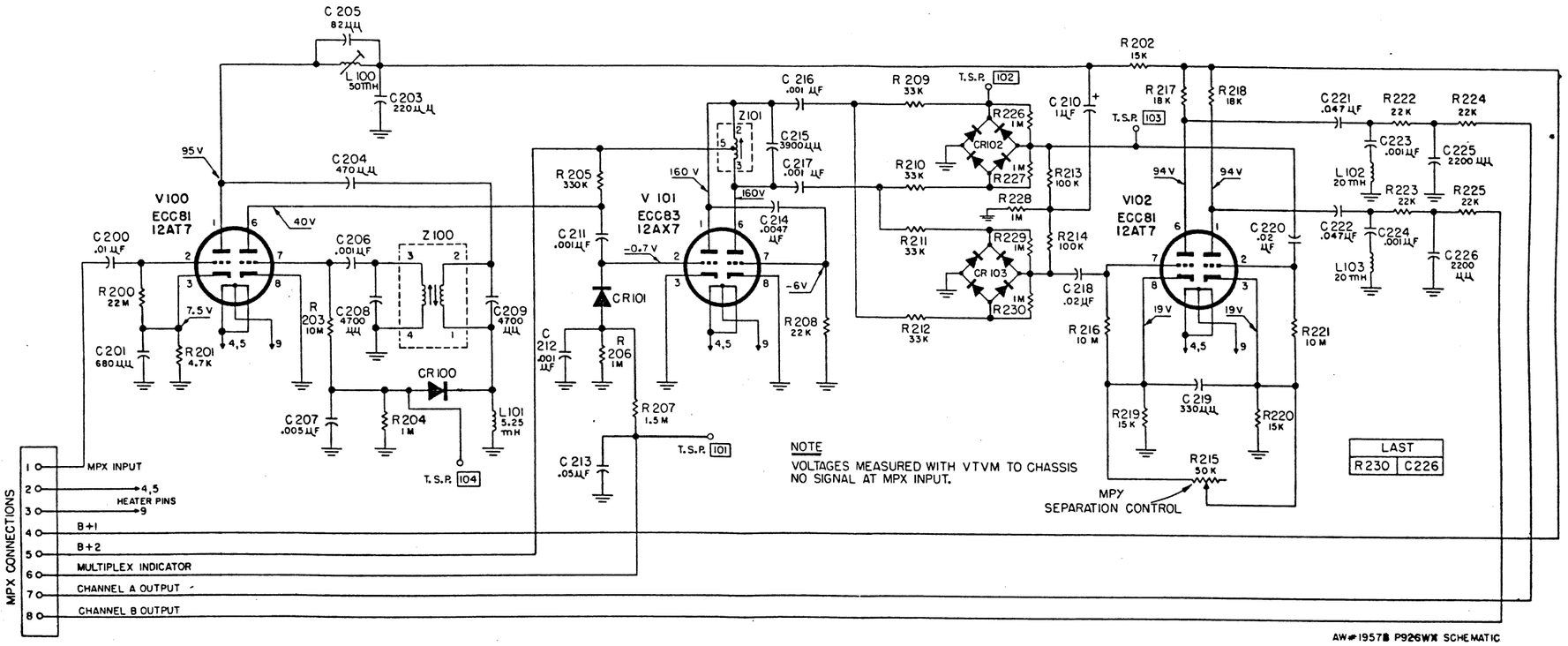
SWITCH POSITIONS					
POS NO	S1 AC & SENSITIVITY	S2 ANTENNA SELECTOR	S3 AFC	S4 MUTING CONTROL	S5 SELECTOR
1	POWER OFF (SHOWN)	300 OHMS (SHOWN)	OFF (SHOWN)	OFF (SHOWN)	MONO (SHOWN)
2	LOCAL	72 OHMS	MICROTUNE	ON	AUTOMATIC
3	DISTANT		AFC 1		STEREO-FILTER
4			AFC 2		STEREO

NOTES:
1. DENOTES READINGS OF MICROTUNE CIRCUIT WHEN IN OPERATION.
2. DENOTES READINGS OF MUTING CONTROL WHEN SET AT MAXIMUM POSITION.
3. 87V READING WHILE RECEIVING AN MPX STEREO STATION ONLY.

LAST R111 C96

Ampex 2010E P914 SCHEMATIC

SCHEMATIC DIAGRAM • MULTIPLEX SECTION

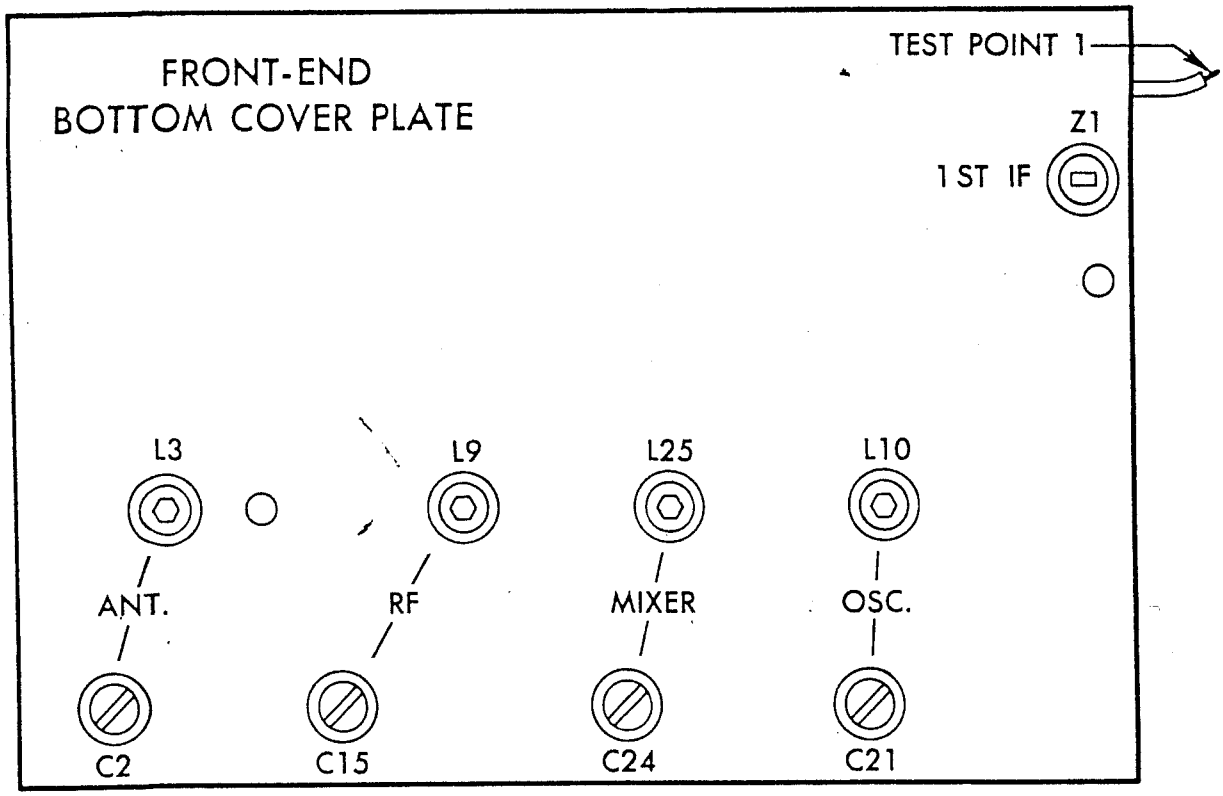


NOTE
VOLTAGES MEASURED WITH VTVM TO CHASSIS
NO SIGNAL AT MPX INPUT.

LAST	
R230	C226

AW#1957B P926WX SCHEMATIC

FRONT-END ADJUSTMENTS



INS 117

FISHER RADIO CORPORATION · NEW YORK

N9I4-I04AXA
©1962 FISHER RADIO CORPORATION
PRINTED IN U.S.A.
555-GLI2C-I02